PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 22 OCT 2004
WIPO PCT

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
77.357/BE		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/HU 03/00065	08.08.2003	09.08.2002
International Patent Classification (IPC) or both national classification and IPC		
A61K35/78		
Applicant		
HIDVEGI, Máté et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
24.02.2004	21.10.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Pilling, S Telephone No. +49 89 2399-8461

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/HU 03/00065

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-20 as originally filed

Claims, Numbers

1-10 received on 16.09.2004 with letter of 16.09.2004

Drawings, Sheets

1/17-17/17 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

   ☐ the entire international application,

   ☒ claims Nos. 9,10

   because:

   ☒ the said international application, or the said claims Nos. 9,10 relate to the following subject matter which does not require an international preliminary examination (specify):

   see separate sheet

   ☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. are so unclear that no meaningful opinion could be formed *(specify)*:

   ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

   ☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

   ☐ the written form has not been furnished or does not comply with the Standard.

   ☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1,3
	No:	Claims	6
Inventive step (IS)	Yes:	Claims	1,3
	No:	Claims	6
Industrial applicability (IA)	Yes:	Claims	1,3,6
	No:	Claims	

2. Citations and explanations

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see separate sheet

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Re Item III
Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. Claims 9 to 10 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1 (iv) PCT. Consequently, no international preliminary examination will be made in respect of these claims (Article 34(4)(a)(i) PCT).

Re Item V
Reasoned statement under Rule 66~2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2. The documents cited in the International Search Report (ISR) are consecutively numbered DI to D6 in the order of their listing. If not indicated otherwise, reference is made to the passages cited in said ISR.

Novelty

3. None of the presently available prior art documents discloses the use of fermented wheat germ extract for treating/preventing arthritis. Thus, the subject matter of Claims 1 and 3 is new (Article 33(2) PCT).

4. The term antiinflammatory agent in Claim 6 appears vague and seems to encompass antioxidant compounds such as vitamin C. Document D2 discloses a pharmaceutical composition comprising a fermented wheat germ extract (Avemar®) and vitamin C (see the abstract). Document D3 discloses a pharmaceutical composition comprising a fermented wheat germ extract (Avemar®) and vitamin C (see Figure 4). Hence, the subject matter of Claim 6 lacks novelty in view of the disclosure of either document D2 or D3 (Article 33(2) PCT).

Inventive Step

5. Document DI discloses the preparation of anti active-oxygen agents by roasting wheat germ and mixing with koji mould/yeast and then fermenting. It is disclosed that the agents may be used "*50-500 mg/day as anti-inflammatory agents*" (see the abstract). Taking into account (a) the present experimental evidence of

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successful treatment of arthritis in the present specification and (b) the arguments of the Applicant that arthritis is resistant to treatment and that many antiinflammatory agents have no effect in treating arthritis and (c) the large number of potential antiinflammatory compounds that could be tested, the IPEA accepts inventive step in respect of present Claims 1 and 3. In this regard, there appeared to be no clear motivation in the prior art towards using the antioxidant/antiinflammatory compositions of document D1 for treating arthritis. On the basis of the presently available prior art, the expectation of success of such a treatment would appear to have been low.

6. Thus, the subject matter of Claims 1 and 3 is inventive (Article 33(3) PCT).

7. It may also be helpful to note that even in the event that the further active ingredient of Claim 6 was to be distinguished from the disclosure of documents D2 or D3, *e.g.* by restriction to non steroidal anti-inflammatory agents or diclophenac, that such a restriction would be unlikely to render the subject matter of this claim inventive. In this regard, it would appear that combining a known anti-inflammatory agent (see D1) with a further known antiinflammatory agent would not require inventive ability.

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Amended claims

1. Use of a fermented wheat germ extract (Avemar®) for the manufacture of a medicament for treating or preventing or alleviating arthritis.

2. The use according to claim 1 wherein arthritis is rheumatoid arthritis.

3. Use of a fermented wheat germ extract (Avemar®) and an anti-inflammatory agent for the manufacture of a medicament for treating or preventing or alleviating arthritis.

4. The use according to claim 3 wherein the anti-inflammatory agent is a non-steroidal anti-inflammatory agent.

5. The use according to claim 5 wherein the non-steroidal anti-inflammatory agent is diclophenac.

6. A pharmaceutical composition comprising an effective amount of fermented wheat germ extract (Avemar®) in combination with an anti-inflammatory agent and a pharmaceutically acceptable carrier.

7. The pharmaceutical composition according to claim 6 wherein the anti-inflammatory agent is a non-steroidal anti-inflammatory agent.

8. The pharmaceutical composition according to claim 7 wherein the non-steroidal anti-inflammatory agent is diclophenac.

9. A method of treating or preventing or alleviating arthritis in a mammal including human comprising administering to said mammal, in which such treatment or prevention or alleviation is desired, an effectice amount of fermented wheat germ extract (Avemar®).

10. The method of claim 9 comprising further administering an anti-inflammatory agent.

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